

WHAT IS CLAIMED IS:

1. An apparatus for cleaning an image transfer surface in an image transfer device, comprising:
  - a first cleaning station for applying cleaning fluid to the image transfer surface and removing cleaning fluid with a first portion of residual material from the image transfer surface;
  - a second cleaning station for applying cleaning fluid to the image transfer surface and removing cleaning fluid with a second portion of residual material from the image transfer surface, wherein the first and second cleaning stations are positioned to consecutively clean the image transfer surface;
  - a first tank in fluid communication with the first cleaning station, the first tank supplying cleaning fluid to the first cleaning station, and receiving cleaning fluid with residual material from the first cleaning station; and
  - a second tank in fluid communication with the second cleaning station, and in fluid communication with the first tank, the second tank supplying cleaning fluid to the second cleaning station, and receiving cleaning fluid with residual material from the second cleaning station, and supplying cleaning fluid to the first tank.
2. The apparatus of claim 1, wherein the first cleaning station has an associated width in which cleaning fluid is applied and removed that is larger than an imaged width on the image transfer surface, and wherein the second cleaning station has an associated width in which cleaning fluid is applied and removed that is larger than the imaged width and smaller than the associated width of the first cleaning station.
3. The apparatus of claim 1, further comprising a cleaning fluid source supplying cleaning fluid to the second tank.
4. The apparatus of claim 1, wherein the first cleaning station includes a fluid inlet for receiving cleaning fluid from the first tank, and a fluid outlet for returning cleaning fluid with residual material to the first tank, and wherein the second cleaning station

includes a fluid inlet for receiving cleaning fluid from the second tank, and a fluid outlet for returning cleaning fluid with residual material to the second tank.

5. The apparatus of claim 1, wherein the first and second cleaning stations are contained in a common housing.
6. The apparatus of claim 1, wherein the first tank supplies and receives cleaning fluid from the first cleaning station prior to the second tank supplying and receiving cleaning fluid from the second cleaning station, whereby a concentration of residual material in the cleaning fluid of the first tank increases at a faster rate than a concentration of residual material in the cleaning fluid of the second tank.
7. The apparatus of claim 6, whereby the first portion of residual material removed from the photoconductor surface is greater than the second portion of residual material removed from the photoconductor surface.
8. The apparatus of claim 1, wherein each of the first and second cleaning stations comprise:
  - a cleaning fluid applicator for contacting the image transfer surface to apply cleaning fluid to the image transfer surface and remove cleaning fluid containing residual material from the image transfer surface; and
  - a cleaning blade for pressing against the image transfer surface for removing cleaning fluid and residual material from the image transfer surface.
9. The apparatus of claim 8, wherein the cleaning fluid applicator comprises a sponge roller.
10. The apparatus of claim 9, wherein the sponge roller includes at least an outer layer of pliable, absorptive material.

11. The apparatus of claim 8, wherein each of the first and second cleaning stations further comprise a cleaning fluid dispenser for wetting the cleaning fluid applicator with cleaning fluid received from the first and second tanks, respectively.
12. The apparatus of claim 11, wherein the cleaning fluid dispenser comprises a spray bar.
13. The apparatus of claim 1, further comprising a cleaning fluid filter disposed between the second tank and the first tank.
14. A liquid electrophotographic (LEP) device comprising:
  - a photoconductive surface for creating an image thereon, the image formed by liquid including imaging oil;
  - a cleaning apparatus for cleaning the photoconductor surface, the cleaning apparatus including a first cleaning station and a second cleaning station, the first and second cleaning stations positioned to consecutively clean the photoconductor surface;
  - a first cleaning fluid tank fluidically connected to the first cleaning station for supplying cleaning fluid to the first cleaning station; and
  - a second cleaning fluid tank fluidically connected to the second cleaning station and to the first tank for supplying cleaning fluid to the second cleaning station and to the first tank.
15. The liquid electrophotographic device of claim 14, wherein the first tank supplies and receives cleaning fluid from the first cleaning station prior to the second tank supplying and receiving cleaning fluid from the second cleaning station, whereby a contamination level of the cleaning fluid in the first tank increases at a faster rate than a contamination level of the cleaning fluid in the second tank.
16. The liquid electrophotographic device of claim 14, further comprising an external cleaning fluid source for replenishing the second tank with cleaning fluid.

17. The liquid electrophotographic device of claim 14, wherein the cleaning fluid is imaging oil.
18. The liquid electrophotographic device of claim 17, further comprising a development device for developing a latent image on the photoconductor surface to obtain the image formed by liquid including imaging oil, wherein the first tank is further fluidically connected to the development device to supply imaging oil to the development device.
19. The liquid electrophotographic device of claim 14, further comprising:  
an exposure device for forming a latent image on the photoconductor surface;  
a development device for developing the latent image on the photoconductor surface to obtain the image formed by liquid including imaging oil; and  
an image transfer device for transferring the image from the photoconductor surface to a printing sheet.
20. The liquid electrophotographic device of claim 14, wherein each of the first and second cleaning stations comprise:  
a first roller for contacting the photoconductor surface to apply cleaning fluid to the photoconductor surface and absorb cleaning fluid containing residual contamination from the photoconductor surface; and  
a cleaning blade for pressing against the photoconductor surface for removing cleaning fluid and residual contamination from the photoconductor surface.
21. The liquid electrophotographic device of claim 20, wherein each of the first and second cleaning stations further comprise a second roller for contacting the first roller to remove cleaning fluid from the first roller.
22. The liquid electrophotographic device of claim 20, wherein each of the first and second cleaning stations further comprise a spray bar for wetting the first roller with cleaning fluid received from the first and second cleaning fluid tanks, respectively.

23. The liquid electrophotographic device of claim 14, wherein the photoconductor surface is on a drum.

24. The liquid electrophotographic device of claim 14, wherein the photoconductor surface is on a continuous belt.

25. An apparatus for cleaning an image transfer surface in an image transfer device, comprising:

- a first sponge roller for contacting the image transfer surface to apply cleaning fluid from a first tank to the image transfer surface and absorb cleaning fluid and residual material from the image transfer surface;

- a first squeegee roller for contacting the first sponge roller to remove cleaning fluid and residual material from the first sponge roller;

- a first cleaning blade for pressing against the image transfer surface for removing cleaning fluid and residual material remaining on the image transfer surface after contact with the first sponge roller;

- a second sponge roller for contacting the image transfer surface to apply cleaning fluid from a second tank to the image transfer surface and absorb cleaning fluid and residual material from the image transfer surface;

- a second squeegee roller for contacting the second sponge roller to remove cleaning fluid and residual material from the second sponge roller; and

- a second cleaning blade for pressing against the image transfer surface for removing cleaning fluid and residual material remaining on the image transfer surface after contact with the second sponge roller;

wherein cleaning fluid and residual material removed by the first sponge roller, squeegee roller and cleaning blade is returned to the first tank, wherein cleaning fluid and residual material removed by the second sponge roller, squeegee roller and cleaning blade is returned to the second tank, and wherein the first tank is fluidically connected with and replenished with cleaning fluid from the second tank.

26. A method of cleaning residual material from an image transfer surface in an image transfer device, the method comprising:

positioning a first cleaning station and a second cleaning station to consecutively clean the image transfer surface;

supplying the first cleaning station with a first cleaning fluid from a first tank;

supplying the second cleaning station with a second cleaning fluid from a second tank; and

refreshing the cleaning fluid in the first tank with cleaning fluid from the second tank.

27. The method of claim 26, further comprising:

applying the first cleaning fluid to the image transfer surface within the first cleaning station;

removing the first cleaning fluid and residual material therein from the image transfer surface within the first cleaning station;

returning the first cleaning fluid and residual material therein to the first tank;

applying the second cleaning fluid to the image transfer surface within the second cleaning station;

removing the second cleaning fluid and residual material therein from the image transfer surface within the second cleaning station; and

returning the second cleaning fluid and residual material therein to the second tank.

28. The method of claim 27, wherein removing the first cleaning fluid and residual material therein from the image transfer surface within the first cleaning station includes removing a first portion of contaminated cleaning fluid, and wherein applying the second cleaning fluid to the image transfer surface within the second cleaning station includes diluting a remaining portion of contaminated cleaning fluid on the image transfer surface.

29. The method of claim 27, wherein applying the first cleaning fluid to the image transfer surface within the first cleaning station and removing the first cleaning fluid and

residual material therein from the image transfer surface within the first cleaning station comprises:

- wetting a sponge roller with the first cleaning fluid; and
- rubbing the wetted sponge roller against the image transfer surface.

30. The method of claim 27, wherein applying the second cleaning fluid to the image transfer surface within the second cleaning station and removing the second cleaning fluid and residual material therein from the image transfer surface within the second cleaning station comprises:

- wetting a sponge roller with the second cleaning fluid; and
- rubbing the wetted sponge roller against the image transfer surface.

31. A method of cleaning residual material from an image transfer surface in an image transfer device, the method comprising:

- applying a first cleaning fluid to an image transfer surface having residual material thereon;
- removing a first portion of the first cleaning fluid and residual material therein from the image transfer surface;
- diluting a remaining portion of first cleaning fluid and residual material therein with a second cleaning fluid; and
- removing a first portion of the diluted cleaning fluid and residual material therein from the image transfer surface.

32. The method of claim 31, further comprising:  
replenishing the first cleaning fluid with the second cleaning fluid.